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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/943,610	08/30/2001	Luc R.M. Martens	2001B081	9649

23455 7590 07/07/2003

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EXAMINER
DANG, THUAN D

ART UNIT	PAPER NUMBER
1764	

DATE MAILED: 07/07/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/943,610	MARTENS ET AL.	
	Examiner	Art Unit	
	Thuan D. Dang	1764	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *01 May 2003* .

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-23* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-23* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other:

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brown et al (6,048,816).

Brown discloses a process of conversion of oxygenate to a product containing C_{2-4} olefins by contacting the feed with a catalyst including zeolites such as ZSM-5 and ZSM-35 (the abstract; col. 2, line 66 thru col. 3, line 2).

Brown appears to be silent as to using at least two different zeolites, namely ZSM-5 and ZSM-35, as the catalysts. Brown does not disclose if these two zeolites are mixed in one reactor or arranged in serial beds/reactors.

However, as discussed, Brown discloses that either ZSM-5 or ZSM-35 can be used as catalytic materials (col. 2, line 66 thru col. 3, line 2).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the Brown process by using both ZSM-5 and ZSM-35 as the oxygenate conversion catalyst since it is prima facie obvious to combine two compositions each of which is taught by the prior art to be useful for the same purpose, in order to form a third composition which is to be used for the very same purpose. *In re Kerkhoven*, 205 USPQ 1069 (CCPA 1980).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the Brown process by arranging the zeolites in a same bed as a mixture or in different beds/reactors in any order such as the applicants' claimed order as called for in claim 13 since it is expected that in any arrangement of zeolites having similar reaction activities, these arrangements of similar catalysts would yield similar results.

On column 6, lines 5-9, Brown discloses which components are present in the oxygenate feed.

Claims 1-11 and 13-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Leyshon et al (5,026,936) in view of Brown et al (6,048,816).

Leyshon discloses a process for production of propylene from a C4+ hydrocarbon feed including butenes in the presence of a zeolite catalyst such as ZSM-35 (the abstract; the sole figure; col. 3, line 39-43; col. 4, line 16).

Leyshon does not disclose that C4+ stream come from an oxygenate conversion , but discloses generally that butenes can be used (col. 3, lines 38-44). However, Brown discloses a process, as discussed above, which produces C_{2-4} olefins.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the Leyshon process by using C4 olefin in the Brown C_{2-4} olefinic product to increase the production of propylene since both processes are desired to produce propylene. Further, it is expected that using any olefin, provided that they are C4+ olefins, as the feed for Leyshon's process would yield similar results.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the Leyshon process having been modified by the teaching of Brown by separating C4 olefin from the Brown product before the cracking step of Leyshon since propylene is desired product of Leyshon's process. As a result, the concentration, as called for in claims 16-18, is expected due to the separation.

A fluid bed is used by Brown (col. 5, line 61).

Response to Arguments

Applicant's arguments filed on 5/1/03 have been fully considered but they are not persuasive.

The argument that the claimed process shows unexpected results as shown in examples is not persuasive since the claimed process is not the process in the example since as shown in the examples, the exemplified process is operated (1) using methanol as the feed (not general oxygenates), (2) catalysts including P-ZSM-5 followed by ZSM-35 (not unspecified catalysts arranged in any order), (3) with an increase of ethylene and propylene (not general olefins, namely butylenes and pentanes. Note there is an decrease of butylenes and pentanes) and (4) under a specific temperature of 560°C (the temperature is not recited in the claim). Therefore, the claimed process does not yield any unexpected result since it has been established that evidence of unobviousness must be commensurate in scope with the claims. *In re Kulling* 14 USPQ 2d 1056, 1058 (Fed. Cir. 1990); *In re Clemans* 206 USPQ 389 (CCPA 1980); *In re Dill* 202 USPQ 805, 808 (CCPA 1979); *In re Greenfield* 197 USPQ 227 (CCPA 1978); *In re Lindner* 173 USPQ 356, 358 (CCPA 1972); *In re Hyson* 172 USPQ 399 (CCPA 1972); *In re Tiffin* 171 USPQ 294 (CCPA 1971); *In re Mclaughlin* 170 USPQ 209 (CCPA 1971); *In re Kennedy* 168 USPQ 587 (CCPA 1971); *In re Law* 133 USPQ 653 (CCPA 1962).

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO

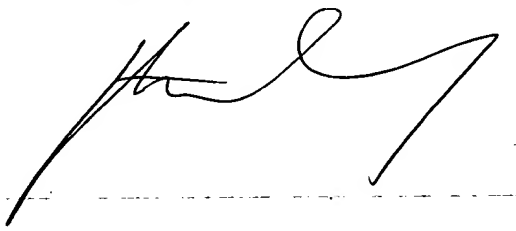
MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thuan D. Dang whose telephone number is 703-305-2658. The examiner can normally be reached on Mon-Thu.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Caldarola can be reached on 703-308-6824. The fax phone numbers for the organization where this application or proceeding is assigned are 703-305-5408 for regular communications and 703-305-3599 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

Thuan D. Dang
Primary Examiner
Art Unit 1764



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